蝶と蛾 *Tyô to Ga* **43** (2): 95-106, June 1992

New eastern-palearctic clear-wing moths (Sesiidae, Lepidoptera)

Karel ŠPATENKA[1] and Yutaka ARITA[2]

[1] Entomological Laboratory, Research Institute of Food Industry and Agricultural Service, 289 11 Pecky, Czechoslovakia

[2] Zoological Laboratory, Faculty of Agriculture, Meijo University, Tempaku-ku, Nagoya, 468 Japan

Abstract Seven new species and one new subspecies of clear-wing moths from Japan and China are described. *Synanthedon esperi* sp. n. from Okinawa is somewhat similar to *S. quercus* (Mats.), but it differs from it in the completely yellow ventral part of the abdomen. The host plant is unknown. *S. multitarsus* sp. n. was reared from *Salix* sp. and *Alnus* sp. in Hokkaido and Honshu. It is similar to *S. flaviventre* (Stgr.) and *S. martjanovi* Shelj., but it differs from these species in swollen hind metatarsus in males. *S. pseudoscoliaeforme* sp. n. is described according to a single specimen from Kyoto. It is similar to *S. scoliaeforme* (Bkh.) in wing pattern (large, rounded discal spot of forewing), but it differs substantially from this species in the coloring of legs and abdomen. The host plant is unknown. *S. yanoi* sp. n. is somewhat similar to the European *S. andrenaeforme* (Lasp.) and to *S. ulmicolum* Yang & Wang, but it differs in structure of the male genitalia and in habitual details. It is known only from a few specimens from Hokkaido and Kyushu; host plant unknown. *S. fukuzumii* sp. n. is known from two specimens from Honshu and Kyushu, and the host plant is unknown. It is similar to *S. uralense* Bart., *S. spatenkai* Gorbunov and *S. armeniacum* Gorbunov. *Sesia solitera* sp. n., from high mountains in China, is known from a single specimen only. It is very characteristic and not similar to other *Sesia* species. *Similipepsis yunnanensis* sp. n. from high altitudes in North Yunnan (China) is known from two specimens. It is the second palearctic species of this genus and it is clearly different from all known *Similipepsis* species. *Synanthedon scoliaeforme japonicum* ssp. n. is known from a few specimens from Hokkaido and Honshu. It differs from typical *S. scoliaeforme scoliaeforme* (Bkh.) in having a black anal tuft, yellowish smoked wing, and other differences.

Key words Sesiidae, *Synanthedon, Sesia, Similipepsis*, new species, new subspecies, eastern-palearctic, taxonomy.

Synanthedon esperi sp. n. (Fig. 1)

Material: Holotype ♀: Japan, Ryukyus, Okinawa I., 19. V. 1978, H. Makihara lgt., in coll. Zool. Lab., Meijo University, Nagoya (ZLMU).

Description: Wingspan 25 mm. Labial palpus yellow, 2nd and 3rd joint with black scales; antenna blackish-brown, yellow ventrally except black tip. Frons white, pale brown only medially; vertex black. Pericephalic hairs black, white laterally and ventrally.

Thorax blackish-brown with greenish sheet. Tegula with individual ochreous scales, with a small yellow spot on basis of forewing; metathorax with two large groups of yellow scales; pleura yellow. Fore coxa entirely yellow, femur blackish-brown dorsally, yellow ventrally, tibia and tarsus yellow, with blackish-brown scales dorsally. Hind tibia and tarsus bluish-black, yellow ventrally, with broad yellow stripes along bases of yellow tibial spurs.

Forewing with indistinct yellow line between veins Sc and C, anal margin densely dusted with yellow. Apical area very narrow, two times narrower than ETA (external transparent area), being blackish-brown. Discal spot narrow, blackish-brown, with a few

yellow scales along outer margin. ETA trapezium-shaped, large, divided into six cells. Discal spot of hindwing very narrow, reaching only vein M_2.

Abdomen black, 1st, 2nd, 5th and 6th tergites narrowly yellow bordered along distal margins, 4th tergite entirely yellow, only with medial black wedge on proximal margin. Anal tuft clear-red, only proximally it is blackish-brown. The entire abdomen yellow ventrally.

Genitalia ♀ not examined, male unknown. Variability, bionomics and habitat unknown.

Differential diagnosis: The species cannot be compared with any palearctic (and also oriental) species. It somewhat resembles "*S. vespiformis*-group", but differs from all representatives of this group in having an entirely yellow abdomen ventrally, and all species of this group (with some exceptions) have a red discal spot on the forewing, including eastern palearctic *S. quercus* (Mats.).

Synanthedon multitarsus sp. n. (Figs. 2, 9, 12)

Material: Holotype ♂: Japan, Hokkaido, Shari-gun, Koshimizu-cho, Miwa, 21-23. VI. 1989, Y. Arita and S. Kawahara lgt., emerged 26. VII. 1989, reared from larvae feeding into a small stem of *Salix* sp., in coll. ZLMU. Allotype ♀: with same locality and host plant as holotype, emerged 4. VIII. 1989, in coll. ZLMU. Paratypes: 1 ♂, Hokkaido, Sapporo, host plant *Salix* sp., em. 2. VI. 1984, T. Kumata lgt., in coll. Entom. Inst. Hokkaido Univ., Sapporo; 1 ♀ with same data as holotype, em. 21. VII. 1980, S. Kawahara lgt.; 1 ♀ with same locality and host plant as holotype, em. 21. V. 1989, S. Kawahara lgt.; 2 ♀ with same locality and host plant as holotype, em. 30. VII. and 9. VIII. 1989, Y. Arita and S. Kawahara lgt.; 1 ♂ with same locality as holotype, em. 11. VII. 1989, reared from larva feeding into a small stem of *Salix sachalinensis* Fr. Schmidt., S. Kawahara lgt.; 1 ♂ with same data as holotype, em. 30. VII. 1989, S. Kawahara lgt.; 6 ♂ 3 ♀, Hokkaido, Shibetsu-shi, Onnebetsu-cho, 25-26. VI. 1989, em. 13. VII.-1. VIII. 1989, reared from larvae feeding into a small stem of *Salix* sp., Y. Arita lgt.; all in coll. ZLMU; 2 ♂ 2 ♀, Hokkaido, Shibetsu-shi, Onnebetsu-cho, 25-26. VI. 1989, em. 22. VII.-VIII. 1989, Y. Arita lgt., K. Špatenka coll.; 1 ♀, Honshu, Nagano-ken, Maruyama-dani, Mibugawa, em. 9. VII. 1981, T. Maejima lgt., in coll. ZLMU; 2 ♂ 2 ♀, Honshu, Nagano-ken, Hase-mura, Maruyama-dani, 24. VI. 1990, em. VII. 1990, H. Nakano and S. Niimi lgt.; 1 ♂ 4 ♀, Honshu, Aichi-ken, Higashikamo-gun, Asuke-cho, 25. VI. 1990, em. VII. 1990, H. Nakano and S. Niimi lgt.; 1 ♂ 1 ♀, same locality, 15. III. 1990, em. IV.-V. 1990, reared from *Alnus serrulatoides* Call., H. Nakano and S. Niimi lgt.

Description ♂: Wingspan 16-23 mm. Labial palpus black, with white scales on 2nd joint, white anteriorly and ventrally; frons black; vertex black; antenna black; pericephalic hairs black dorsally, with white scales, white laterally.

Thorax black, with bluish-green sheen; tegula with individual white scales distally; metathorax with two groups of long thin, white, yellow, and black scales; pleura black. Fore coxa white in basal half, black in apical half; femur, tibia and tarsus black, densely mixed with white scales. Hind leg blackish-brown, spurs white, there are narrow white rings on bases of spurs; 1st tarsomere very thick, about as thick as tibia, with adpressed scales, its distal margin white. Other tarsomeres thin, with adhered scales, black, densely mixed with white scales, mostly ventrally.

Forewing: costal and anal margin blackish-brown, with violet sheen, sparsely covered with ochreous scales. Discal spot mid broad, blackish-brown, apical area equally broad as

ETA, blackish-brown, without pale stripes. ETA trapezium-shaped, slightly higher than broad, divided into 5 cells.

Hindwing: hyaline, with narrow brownish-black margin and long brownish-black fringes, discal spot narrowly wedge-saped, blackish-brown, reaching only a little beyond vein M_2.

Abdomen blackish-brown, 2nd tergite with quite individual yellow scales on distal margin; 4th tergite broadly lemon-yellow on distal margin, slightly broadening laterally; 1st and 2nd tergites with narrow lemon-coloured longitudinal lines laterally; 3rd tergite laterally with a few yellow scales distally. Abdomen ventrally: 4th sternite yellow on distal margin; 5th sternite with yellow scales on distal margin, but only medially. Anal tuft dart-shaped (similarly as in *S. formicaeforme* (Esp.)), blackish-brown, with greenish-blue lustre, narrowly bordered by yellowish-white line along periphery.

Differences ♀: It differs only in having thin 1st tarsomere of hind leg.

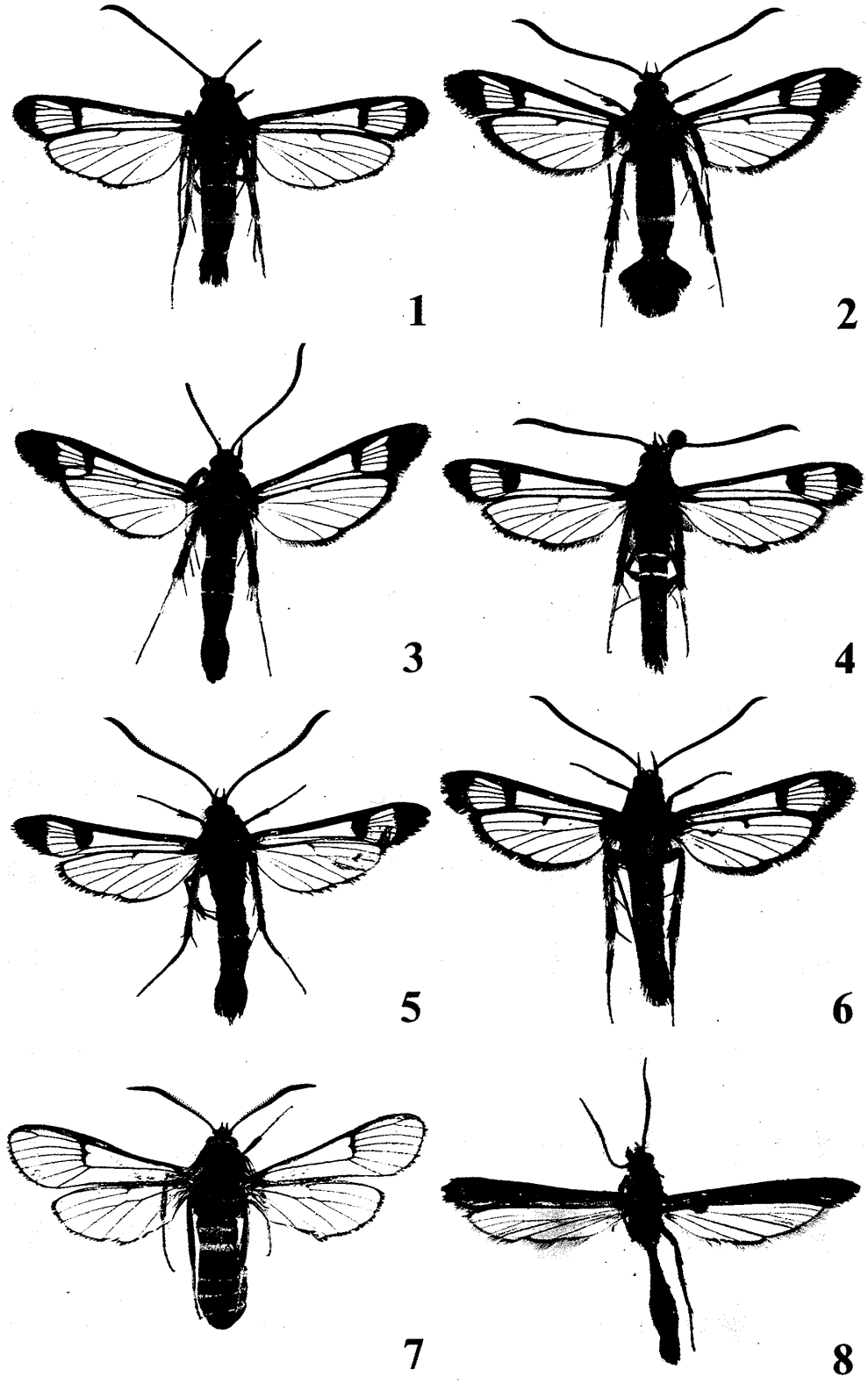
Variability: Some specimens may not have a very distinct pale yellow ring on 2nd abdominal tergite; pleura sometimes with individual yellow scales.

Genitalia ♂ (Fig. 9): Valva strongly swollen subapically, mostly covered with bristles with bifurcate tips. Bare area along ventral margin of valva relatively small, with its dorsal margin concave. Crista sacculi straight, relatively broad, shortly tipped and covered with broad, simple, strongly sclerotized setae almost throughout. These bristles form a narrow, slightly convex line. Gnathos with drop-shaped elongated cristae, crista medialis equally long, only proximally in lateral view it overlaps lateral cristae. Saccus very broad, short, strongly sclerotized, broadened apically, with a shallow incision at tip. Aedoeagus very slender, straight.

Genitalia ♀ (Fig. 12): All parts except antrum and distal part of lamella antevaginalis weakly sclerotized. Apophysae posteriorly and anteriorly roughly equally long; 8th tergite slightly longer than broad. Antrum very long, twice as long as ductus bursae, only slightly broadened distally merging fluently into ductus bursae. Ostium bursae slightly funnel-shaped. Lamella antevaginalis with tiny spines on surface. Bursa copulatrix small, elliptical, with tiny bristles throughout its surface.

Differential diagnosis: It differs from other allied and similar species in having a strongly scaled 1st hind tarsomere in the male. It resembles somewhat *S. flaviventre* (Stgr.), which has the abdomen whitish ventrally, and yellow bordered tergites 2, 4, 6 and 7. The similar *S. martjanovi* Shelj. has the abdomen whitish ventrally too, and another shape of anal tuft. *S. formicaeforme* (Esp.), which is similar to above described species in the shape of the anal tuft, differs in many characters, *e.g.* deep-red apical area of forewing and red abdominal tergites, etc.

Bionomics and habitat: Larva lives within stems of low-growing shrubly willows or a small branch of large willow trees (*Salix* spp.) or, rarely, alder (*Alnus serrulatoides*) which grow along streams, riverside and river beaches. The pupa is in a cocoon very close to the bark. Adults occur from early July to early August, sometimes together with *Synanthedon herzi* Špatenka & Gorbunov in Hokkaido. The length of the life-cycle of this species is not verified.



Figs. 1 – 8. Sesiidae species. 1. *Synanthedon esperi* sp. n., ♀, holotype; 2. *S. multitarsus* sp. n., ♂, paratype; 3. *S. yanoi* sp. n., ♂, holotype; 4. *S. pseudo-scoliaeforme* sp. n., ♀, holotype; 5. *S. scoliaeforme japonicum* ssp. n., ♂, holotype; 6. *S. fukuzumii* sp. n., ♀, holotype; 7. *Sesia solitera* sp. n., ♂, holotype; 8. *Similipepsis yunnanensis* sp. n., ♂, holotype.

Synanthedon yanoi sp. n. (Figs. 3, 10)

Material: Holotype ♂: Japan, Kyushu, Kuro-dake, 3. VII. 1982, M. Nakajima lgt., coll. ZLMU. Paratypes: 2 ♂, Japan, Hokkaido, Shari-gun, Koshimizu-cho, Miwa, 4. VIII. and 8. VIII. 1975, S. Kawahara lgt., coll. ZLMU.

Description: Wingspan 23 mm. Labial palpus black dorsally, with individual yellow scales on segments 2-3, yellow anteriorly and ventrally; antenna brownish-black, brown ventrally; frons dark brown; vertex blackish-brown; pericephalic hairs ochreous-yellow.

Thorax blackish-brown, pleura with yellow spot. Fore leg: coxa yellow dorsally over the whole length, tibia and tarsus ochreous dusted. Hind leg: blackish-brown with strong violet lustre, tibia with yellow rings along bases of yellow spurs, tarsus blackish-brown, 1st segment mixed with yellow, tarsus throughout yellow ventrally.

Forewing with elongate apex, costal and anal margins blackish-brown with individual ochreous scales, discal spot medium-broad, blackish-brown, apical area very broad, brownish black, about apex it is 1.5 times as broad as ETA, with very indistinct yellowish-brown stripes between veins. ETA slightly higher than broad, trapezium-shaped, divided into 5 cells. All dark parts of wing ochreous dusted from ventral side.

Hindwing hyaline, with narrow blackish-brown outer margin and short blackish-brown fringes. Discal spot very narrow and short, reaching only the vein M_2, being blackish-brown.

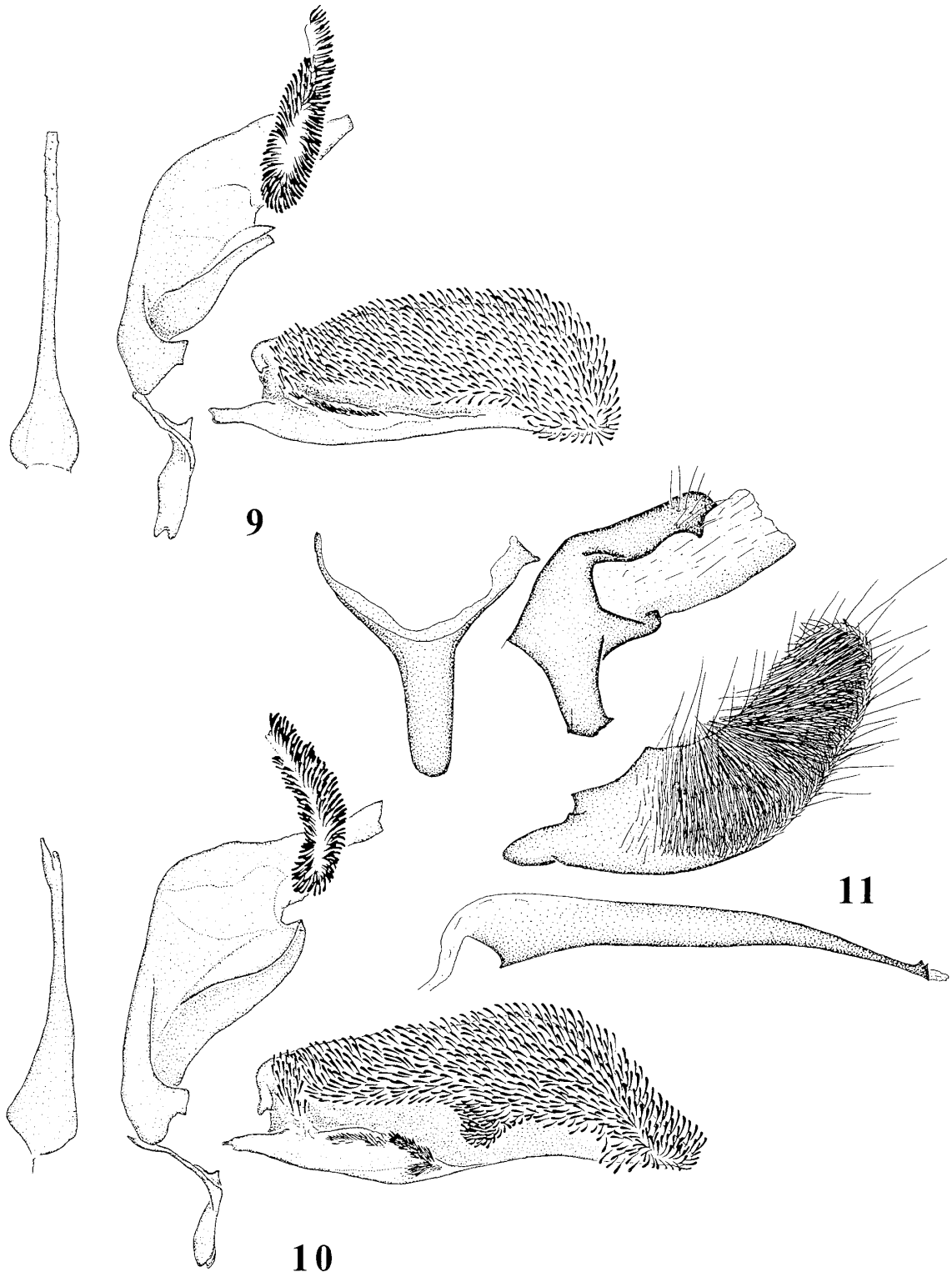
Abdomen blackish-brown, with violet sheen, 2nd tergite bordered with clearly yellow row of scales along distal margin, 4th tergite with more distinct yellow distal margin, anal tuft bluish-black with some individual yellow hairs. Abdomen laterally: 2nd tergite yellow bordered distally, 4th tergite one yellow. Abdomen ventrally: 4th sternite yellow throughout, 5th with dark lateral margin, 6th yellow only medially. Anal tuft mixed with ochreous-yellow scales, valva ochreous distally.

Female unknown.

Variability: Paratypes from Hokkaido have yellow parts paler, and this character is distinct, especially on hind tarsi and abdominal sternites. Yellow coloration is reduced on distal halves of 4th and 5th sternites. One of paratypes has indication of yellow distal bordering of 5th tergite dorsally.

Genitalia ♂ (Fig. 10): Valva narrow, tipped, broadened subapically. A wedge-shaped sclerite projecting into the bare area along ventral margin of valva is densely covered with strongly sclerotized setae. Valva is densely covered with bristles from this projection towards apex and very sparsely covered with bristles towards base. Crista sacculi weakly sclerotized, marging apically into sclerotized band, which is parallel with ventral margin of valva. Ventral margin of crista sacculi is covered with an elongated group of strongly sclerotized tiny bristles subapically, and with a broad, wedge-shaped group of strongly sclerotized, densely arranged, bristles apically. Gnathos with very elongate angular lateral cristae and with very long but not very high crista medialis, which is about twice as long as cristae laterales. Saccus very short, strongly broadened apically, and with a shallow incision on tip. Aedoeagus short, very broad basally, sharply narrowing towards tip, being equally very narrow in apical third.

Differential diagnosis: Somewhat similar to *S. andrenaeforme* (Lasp.), but it differs from the latter in the narrower apex of the forewing, broader discal spot of the forewing, and blackish brown anal tuft (in *S. andrenaeforme* and also in *S. ulmicolum* Yang & Wang



Figs. 9-11. Male genitalia of Sesiidae species. 9. *Synanthedon multitarsus* sp. n., paratype; 10. *S. yanoi* sp. n., paratype; 11. *Similipepsis yunnanensis* sp. n., paratype.

yellow in distal half).

Bionomics and habitat: unknown.

Synanthedon pseudoscoliaeforme sp. n. (Fig. 4)

Material: Holotype ♀: Japan, Kyoto, Takaragaike, 10. V. 1957, Takeuchi lgt., coll. Entomol. Lab. Univ. Osaka Prefecture.

Description: Wingspan 22.5 mm. Labial palpus dark brown, yellowish-white anteriorly and ventrally. Frons dark brown, occipital fringes white; vertex blackish-brown, pericephalic hairs blackish-brown, only ventrally with a few whitish scales; antenna dark brown.

Thorax blackish-brown with greenish lustre, tegula bordered with individual dirty-white hairs along inner margin, metathorax with individual dirty-white hairs, pleura with large yellowish-white spot. Fore leg dark brown throughout; hind leg blackish-brown with purple lustre. Hind tarsus pale yellow, with black spines ventrally, whitish posteriorly. Tibia with white scales along distal margin, mixed with white colour posteriorly; spurs dirty white.

Forewing: costal and anal margin narrowly blackish-brown dusted, as well as veins. Apical area very narrow, blackish-brown, discal spot very broad, being almost rounded; ETA large, trapezium-shaped, concave along outer margin, divided by veins into 6 cells, 6th cell is situated between veins Cu_1 and Cu_2 and not between R_4-R_5 as it is usual in such a large ETA area. Costal and anal margins and cubital stem yellowish-white dusted ventrally.

Hindwing with very narrow blackish-brown margin and long blackish-brown fringes, which change gradually into white towards base of wing. Discal spot blackish-brown, very narrowly wedge-shaped, but one of its rows of scales reaches the stem M_3-Cu_1.

Abdomen blackish-brown, 2nd and 3rd tergite with very narrow but distinct white band along distal margins. Anal tuft blackish-brown with two narrow, longitudinal white stripes. Abdomen laterally: tergites 1-3 with narrow longitudinal white line. Abdomen ventrally: dark brown, with a few white scales in medial part of distal margin of 4th sternite; anal tuft without pale scales.

Males and variability remain unknown.

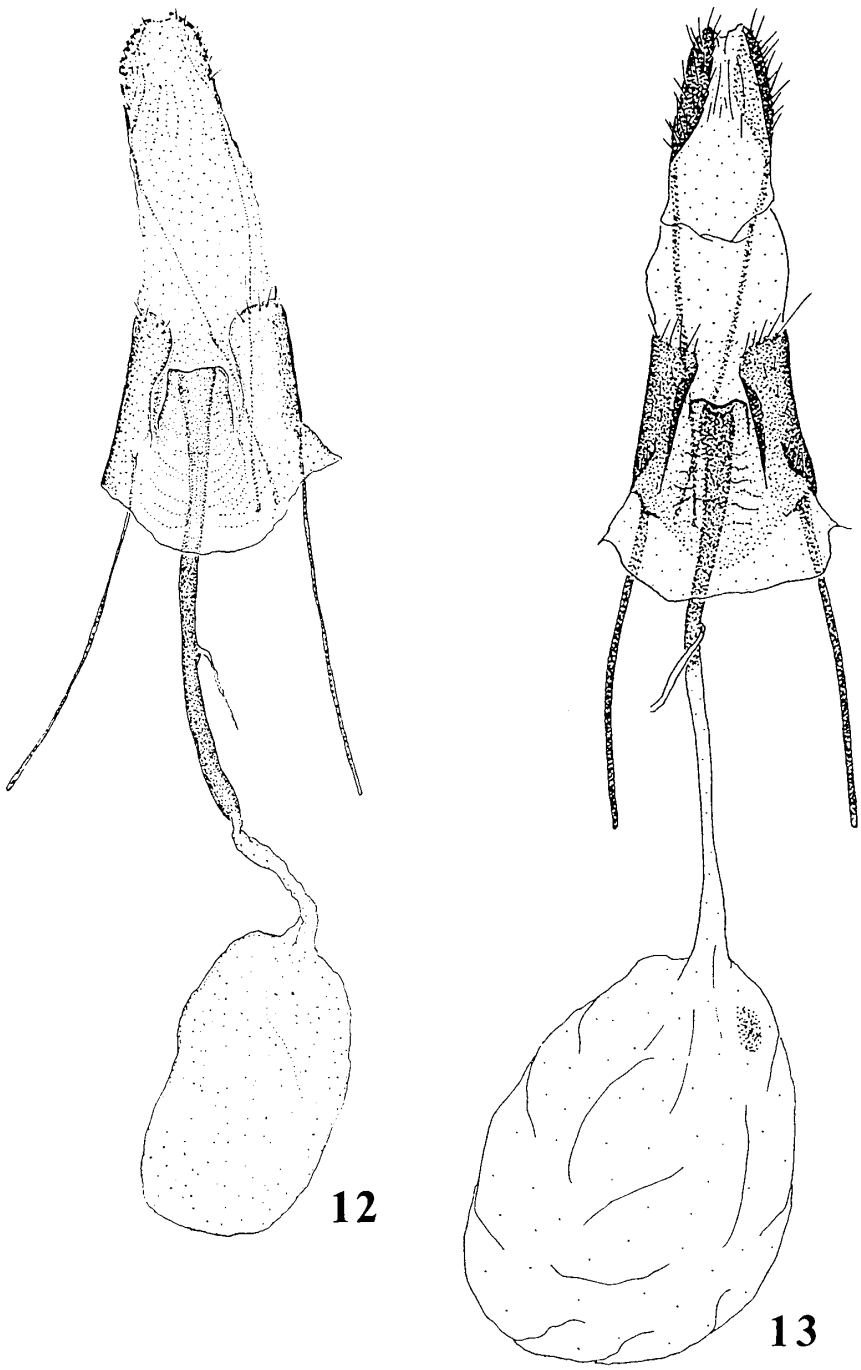
Genitalia were not examined because only the female is known and there is little probability to find diagnostic characters and therefore is not desirable to spoil the holotype.

Differential diagnosis: Somewhat resembles *S. scoliaeforme* (Bkh.) in the shape and colour of forewing and especially in very similar shape of discal spot. All other part of body are different (dark fore leg, white margins of abdominal tergites 2 and 3, anal tuft with two white stripes, etc.).

Synanthedon scoliaeforme japonicum ssp. n. (Fig. 5)

Material: Holotype ♂: Japan, Hokkaido, Shari-gun, Koshimizu-cho, em. 2. VII. 1991, *ex Betula platyphilla* var. *japonica*, S. Kawahara lgt., coll. ZLMU. Paratypes: 1 ♀, Japan, Honshu, Yamanashi-ken, Kitakoma-gun, Masutomi, Kanayama-toge, 22. VII. 1961, T. Saigusa lgt.; 1 ♀, Japan, Honshu, Nagano-ken, Yatsugadake, Happodai, 26. VII. 1981, Y. Kishida lgt.; 1 ♀, same data as holotype, all paratypes in coll. ZLMU.

Description: Wingspan 30-34 mm. Frons blackish-brown with white band in front of eye



Figs. 12-13. Female genitalia of Sesiidae species. 12. *Synanthedon multitarsus* sp. n., paratype; 13. *S. fukuzumii* sp. n., paratype.

(without white band in nominal form). Labial palpus blackish-brown, yellowish-white ventrally and posteriorly (orange in nominal form). Forewing with ochreous touch (in nominal form without colour touch); 4th abdominal sternite yellow, sternites 5-6 black (in nominal form are sternites 5-6 orange). Anal tuft black (orange in nominal form). Subspecies *japonicum* is also larger than nominal form. Differences in genitalia are not important, it is only ostium bursae in *S. scoliaeforme japonicum* lower.

In Scandinavian, Mongolian and east Siberian *S. scoliaeforme* also occur examples with black anal tufts and a white band in front of the eyes. This form is very common in

Mongolia and the Far East, but is in all other characters identical with the nominal form and occurs sympatrically.

Synanthedon fukuzumii sp. n. (Figs. 6, 13)

Material: Holotype ♀: Japan, Honshu, Nagano-ken, Kiso-gun, Agematsu-cho, Kitano, 5. VII. 1987, K. Fukuzumi lgt., coll. ZLMU. Paratype: 1 ♀, Japan, Kyushu, Sobosan (Bungo), 19. VII. 1931, Esaki and Fujino lgt., coll. Entomological Lab., Kyushu University.

Description: Wingspan 23.5 mm. Antenna blackish-brown; labial palpus blackish-brown with a few grey scales, white ventrally and posteriorly; frons brown with strong lustre; occipital fringe white; vertex blackish-brown with blue lustre; pericephalic hairs ochreous.

Thorax blackish-brown; fore leg blackish-brown, tibia brown ventrally. Hind leg blackish-brown, on the bases of spurs with narrow white rings, spurs white ventrally.

Forewing with very good developed hyalline areas; ETA large, rounded, with concave outer margin, divided into 5 cells, with small 6th cell between veins R_4-R_5, more than two times broader than apical area. Costal and anal margins and apical area dark brown, without light scales; discal spot narrow, blackish-brown. Forewing ventrally; costal and anal margin and cubital stem densely dusted with ochreous scales; outer margin of discal spot with small orange spot.

Hindwing with very narrow blackish-brown outer margin and with narrow blackish-brown discal spot, which reaches only vein M_2; fringes long, blackish-brown.

Abdomen blackish-brown; 4th tergite dusted with orange-red scales, its distal one-third completely red. Anal tuft mixed with white scales. Abdomen ventrally: 4th sternite with narrow red band on distal margin.

Variability: Paratype has a white spot on the basis of the fore coxa dorsally. It is damaged, without antennae.

Genitalia ♀ (Fig. 13): 8th tergite about as broad as long; ostium bursae slightly convexly depressed; antrum a little shorter than ductus bursae, narrow; ductus bursae straight, narrow; bursa copulatrix ball-shaped, with small rounded indistinct signum distally.

Differential diagnosis: Similar to other "red-banded" species in the genus *Synanthedon*: *S. spatenkai* Gorbunov from Georgia, *S. armeniacum* Gorbunov from Armenia, *S. uralense* (Bart.) from S. Ural Mts. and Kazakhstan and *S. pipiziforme* (Led.) from Lebanon, Syria and S. Turkey. In *S. spatenkai* is 4th sternite completely red (in *S. fukuzumii* only distal margin of 4th sternite red), *S. uralense* has abdominal sternites 4-7 red and *S. pipiziforme* has all abdominal sternites blackish-brown.

Sesia solitera sp. n. (Fig. 7)

Material: Holotype ♂: China, Quinghai-Sheng, Mt. Riyue, 3500-4000 m, 2. VI. 1986, J. Okuma lgt., coll. ZLMU.

Description: Wingspan 29.0 mm. Antenna thin, black; labial palpus black dorsally, yellowish-white ventrally; frons black with white occipital fringe; vertex black with a few ochreous scales.

Thorax black with long, whitish-yellow hairs on the whole surface; patagia whitish-yellow. Pleura black with whitish hairs. Fore leg black, tarsus yellow, tibia yellow

ventrally. Hind leg black, mixed with ochreous scales, tarsus yellow.

Forewing relatively short and broad, hyaline, with black veins and narrow margins. Apical area hyaline, without scales. A few dark ochreous scales present on costal and anal margin near base of wing; fringes very short, black; discal spot narrow, straight, black.

Hindwing hyaline with black veins and narrow outer margin.

Abdomen black with narrow whitish bands at proximally margins of tergites 4-7; tergites 2-3 in proximal half whitish. Abdomen ventrally: black, sternites 1-2 black, sternites 3-7 in proximal halfs whitish.

Female up to date unknown.

Genitalia were not examined, because only one specimen is known.

Differential diagnosis: It is not comparable with any other species of genus *Sesia*, on the basis of habitually remarks.

Bionomics and habitat unknown.

Similipepsis yunnanensis sp. n. (Figs. 8, 11)

Material: Holotype ♂: China, Noth Yunnan, A-tun-tse, ca 4000 m, 29. VI. 1936, H. Höne lgt., coll. Mus. A. Koenig, Bonn. Paratype: 1 ♂, same locality, 25. VI. 1936.

Description: Wingspan 21.5 mm. Frons whitish; vertex black; occipital fringe black; antenna dark brown dorsally, pedicellus white ventrally; labial palpus brown, apical parts of segments 2 and 3 mixed with white scales ventrally.

Thorax completely black; legs black; hind tibia and tarsus white posteriorly; spurs white.

Forewing dark brown with purplish gloss, base and discal spot darker; there are only small hyaline areas between veins M_3-Cu_1 and Cu_1-Cu_2, the latter one is very indistinct and small.

Hindwing hyaline; veins and very narrow outer margin dark brown; posterior half between veins Cu_1-Cu_2 and outer part of anal area are scarcely dusted with dark brown scales; cilia grey.

Abdomen black; tergites 3, 6 and 7 with narrow orange distal margin, the ring on 6th tergite are broader than the other; 1st segment moderately narrowed distally, 2nd extremely depressed, 3rd slightly expanded, 4th broadly expanded. Abdomen ventrally: black, 2nd sternite white, 3rd and 6th sternites bordered orange distally.

Female unknown.

Genitalia ♂ (Fig. 11): Uncus very long with acute tip, tegumen broad; gnathos sharply protruded, similar as in *S. takizawai* Arita & Špatenka; valva typically curved, on whole surface with exception the base with unspecialized long hairs; saccus very broad, rounded at tip; aedoaegus slightly longer than valva, very broad at base, considerably narrowed apically straight, with two teeth.

Differential diagnosis: A little similar to *S. takizawai* Arita & Špatenka, but different in many characters. In *S. takizawai* there are a little developed PTA and ATA too (blackish-brown in *S. yunnanensis*); in *S. takizawai* abdominal sternites 3 and 6 black (with orange bands in *S. yunnanensis*), etc. *S. lasiocera* Hmps., from Assam, the only one known Oriental

species (all others living in tropical Africa), has transparent forewings and only the 2nd abdominal tergite with a narrow white ring.

Acknowledgements

The authors wish to express their thanks to Dr. H. Makihara, Tohoku Branch, Forest and Forest Products Research Institute, Morioka, Mr. M. Nakajima, Oita Prefectural Agricultural Research Center, Oita, Mr. S. Kawahara, Hokkaido, Dr. K. Kumata, Hokkaido University, Sapporo, Dr. S. Moriuti, University of Osaka Prefecture, Sakai for enabling them to study material necessary for the descriptions. We thank Dr. I. Toševski, Beograd and Dr. O. Gorbunov, Moscow for making illustrations of genitalia and Dr. J.B. Heppner, Florida for language correcture.

Reference

Gorbunov, O.G., 1991. Six new species of the clearwing moths from the Caucasus, USSR (Lep., Sesiidae). *Atalanta* **22**: 125-143, 378-379 (pl. 22).

摘　　要

東部旧北区のスカシバガの新種（鱗翅目，スカシバガ科）（Karel Špatenka・有田　豊）

著者らは日本から5新種，1新亜種と中国から2新種のスカシバガを見いだし記載した．

1. *Synanthedon esperi* Špatenka & Arita, sp. n. (Fig. 1)
沖縄島与那で採集された1雌のみが知られている．本種はanal tuftが赤いことや腹部腹面が黄色であることから他の種とたやすく区別できる．食草や生態は不明．

2. *Synanthedon multitarsus* Špatenka & Arita, sp. n. (Figs. 2, 9, 12)
本種は腹部背面第4節後縁にのみ1本のやや広いレモン色の帯をもつことで他の種と分けられる．ヤナギ類（北海道）やネコヤナギとカワラハンノキ（愛知県）から飼育によって多くの成虫が得られた．

3. *Synanthedon yanoi* Špatenka & Arita, sp. n. (Figs. 3, 10)
本種は腹部背面第2節と第4節後縁に黄色の細い帯をもつことで他の種と区別できる．北海道斜里郡小清水町と大分県黒岳からのみ知られ，食草その他のことは不明である．

4. *Synanthedon pseudoscoliaeforme* Špatenka & Arita, sp. n. (Fig. 4)
前翅のdiscal spotの形がヨーロッパの *S. scoliaeforme* (Borkhausen, 1789) に少し似ているが本種ははるかに小さく腹部背面第2節と第3節に白い帯をもつことで区別される．京都の宝ケ池で5月10日に1雌が得られただけである．

5. *Synanthedon scoliaeforme japonicum* Špatenka & Arita, sp. n. (Fig. 5)
ヨーロッパの *S. scoliaeforme* (Borkhausen, 1789) に酷似するが日本産のものはより大きい．Anal tuftが基亜種ではオレンジ色であるが亜種 *japonicum* では黒いことが大きな差異である．基亜種の食草はシラカンバであるが本亜種も北海道斜里郡で川原進氏によってシラカンバの幹の根際より蛹が繭とともに発見され1雄1雌が羽化した．

6. *Synanthedon fukuzumii* Špatenka & Arita, sp. n. (Figs. 6, 13)
腹部背面に「赤帯」をもつ *Synanthedon* 属のいくつかの種に似るが本種は腹部第4節の後縁にのみ赤帯をもつことから他の「赤帯」の種から区別できる．

7. *Sesia solitera* Špatenka & Arita, sp. n. (Fig. 7)
中国青海省日月山の高山帯（3500-4000 m.）で得られた1雄のみが知られる．非常に特異な種で他に近似の種はない．

8. *Similipepsis yunnanensis* Špatenka & Arita, sp. n. (Figs. 8, 11)

中国北部雲南省のA-tun-tseの高山帯（約4000 m.）で得られた2雄をドイツ・ボンのAlexander Koenig動物学博物館のHöneコレクションより見いだした．本種はいわゆる腰の細い種類で日本のコシボソスカシバに良く似る．*Yunnanensis*では腹部背面第3節と第6節にオレンジ色の帯をもつが*takizawai*では第3節に帯はない．

(Accepted March 13, 1992)

Published by the Lepidopterological Society of Japan,
c/o Ogata Hospital, 2-17, Imabashi 3-chome, Chuo-ku, Osaka, 541 Japan